

## **REMARKS**

The Office Action received on June 18, 2007 and comments therein have been carefully considered. Claims 1-16 are currently pending. Claims 1-5, 7-13, 15 and 16 have been rejected; Claims 6 and 14 have been objected to; and the drawings have been objected to by the Examiner. Applicants have amended Claim 1, canceled Claims 5 and 12; and added new Claims 17, 18 and 19. Support for the new claims is found in the specification in paragraph [0024] and Figure 3, and in paragraph [0022], for examples.

### **I. Allowable Subject Matter**

Applicants appreciate the Examiner's recognition of allowable subject matter in Claims 6 and 14 noting that both claims would be allowable if rewritten in independent form including any limitations of the base and intervening claims.

### **II. Claim Objection**

The Examiner has objected to Claim 3 pursuant to 37 C.F.R. § 1.75(c) as being of improper dependent form for reciting "how the device is operated" rather than specify further structure. (Office Action, paragraph 2). Applicants have amended Claim 3 to recite a method. Reconsideration is respectfully requested.

### **III. Drawings**

The Examiner has objected to the drawings pursuant to 37 C.F.R. § 1.83(a) on grounds that "the embodiment where up to 5 light sources are present in a light source assembly" is not shown. (Office Action, paragraph 7). For efficiency to overcome the objection, Applicants have canceled Claim 5.

IV. Claim Rejections

A. Section 112

The Examiner has rejected Claims 5, 7 and 13 pursuant to 35 U.S.C. § 112 as failing to comply with the enablement requirement. Applicants have canceled Claims 5 and 13, and amended the specification to incorporate the subject matter of Claim 7 therein, thereby providing support for Claim 7. No new matter is added. Reconsideration and withdrawal of the rejection is respectfully requested.

B. Section 102

The Examiner has rejected Claims 1-4 and 8-12 pursuant to 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,78,758 to Hwang (“Hwang”) on grounds that “Hwang teaches an ultraviolet (UV) fluid treatment device comprising a housing (Item 3) through which a fluid flows via inlet (Item 29 in Fig. 2) and outlet (Item 20 in Fig. 2)” including UV sources disposed in a horizontal plane as that in Applicants’ invention. (Office Action, paragraph 10). Applicants respectfully traverse the rejection because the Hwang device does not disclose at least two UV sources arranged perpendicular to the flow of fluid as required by Claims 1-4 and 8-12.

To anticipate a claim pursuant to 35 U.S.C. § 102, the "reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter." *See PPG Industries v. Guardian Industries Corp.*, 75 F.3d 1558, 1566 (Fed. Cir. 1996) (emphasis added). *See also Motorola v. Interdigital Technology Corp.*, 121 F.3d 1461, 1471, 43 USPQ2d 1481, 1489 (Fed. Cir. 1997). That is, the reference must expressly or inherently teach the entire claim. However, here, Hwang only teaches a device that requires a cylindrical shell having UV tubes disposed parallel to the curvature of the shell and with the flow of water. By

contrast, Applicants' device requires UV sources disposed traverse to the fluid flow as clarified by the amendment in Claim 1.

Furthermore, regarding Claim 2, the plane of the baffle in the Hwang device bisects the cylinder representing the light source on the perpendicular (longitudinal) axis to direct water to the non-UV (solar) lamp. In Applicants' present invention, the baffle bisects the cylinder of the light source on a parallel axis directing fluid to the UV sources. Thus, because Hwang neither discloses each and every element of the fluid treatment device claimed in claims 1-4 and 8-12, nor enables one skilled in the art to make the device, Hwang simply does not anticipate the present invention. Accordingly, the rejection of Claims 1-14 and 8-12 should be withdrawn.

C. Section 103

The Examiner has rejected Claims 15-16 pursuant to 35 U.S.C. § 103 as being unpatentable over Hwang in view of U.S. Patent No. 7,038,219 to Clark ("Clark") on grounds that Hwang teaches all the required limitations of Claim 1 except for "the inclusion of two photo-detectors at topmost and bottommost portions of a UV treatment device," and that "Clark teaches a UV treatment device including UV photodetectors (102) at the top and bottom of the treatment chamber which are utilized to monitor and control the operating parameters of the UV lamps contained in Clark et al." (Office Action, paragraphs 18-20). Applicants respectfully traverse the rejection because, regardless of the photo-detector capabilities of Clark, Hwang in view of Clark does not show or suggest a device having a perpendicular arrangement of UV sources as in Claims 15 and 16. Without some teaching, suggestion, or incentive to motivate a skilled artisan to combine prior teachings to arrive at Applicants' invention, such prior art is insufficient to form a basis for establishing unpatentability. *See Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d

931 (Fed. Cir. 1990). Clark does not suggest an UV source arrangement as in Applicants' device.

Furthermore, one skilled in the art would not consider Hwang in view of Clark for at least the reason that Clark employs a different source technology than that of Hwang, or the present invention. The Clark reference discloses a method and an apparatus for the sterilization of packages and their contents using light. The apparatus employs a flashlamp system to provide disinfecting radiation. One skilled in the art would know that flashlamps are constructed and operated in a different manner than the UV sources of the present invention. The flashlamps of the Clark apparatus use xenon (*see* column 18, lines 19ff) that provide a symmetrical output. They do not exhibit the same asymmetry of output from the top to bottom as the Applicants' UV sources, which use mercury. Nothing suggests otherwise. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) (cited with approval in KSR Int'l v. Teleflex Inc., 127 S. Ct. 1727, 1740-41 (2007)). As such the Examiner's conclusion that it would have been obvious to include the photo-detector system of Clark with the Hwang structure would not have been obvious.

Regardless of whether Clark discloses two photo-detectors at topmost and bottommost portions of a sterilization assembly, Hwang even in view of Clark does not suggest the fluid treatment device claimed in Claims 15 and 16. Accordingly, Hwang in view of Clark cannot obviate Claims 15 and 16 and the rejection should be reversed.

V. Conclusion

Applicants respectfully submit the application and claims now presented are in condition for allowance. Accordingly, reconsideration and allowance of all claims are respectfully requested.

Applicants would appreciate the courtesy of a telephone call should the Examiner have any questions or comments with respect to this response or the claim language for purposes of efficiently resolving same.

The Commissioner is hereby authorized to charge Deposit Account No. 03-2026 for any fees associated with this Response.

Respectfully submitted,

By



Christine W. Trebilcock

PTO Registration No. 41,373

Cohen & Grigsby, P.C.

11 Stanwix Street, 15th Floor

Pittsburgh, PA 15222-1319

(412) 297-4900